

CLAIMS

What is claimed is:

- Sub 171
1. A coated abrasive belt comprising:
 - a) a strip of coated abrasive having a first portion and a second portion; and
 - b) a joint adhesive for joining the first portion to the second portion to form the belt, wherein the adhesive is formed from a blocked isocyanate, urethane system.
 2. The adhesive of Claim 1 wherein the blocked isocyanate, urethane system includes a blocking agent selected from the group that includes phenols, oximes, alcohols, caprolactam, and diethyl malonate.
 3. The adhesive of Claim 1 wherein the blocked isocyanate, urethane system includes an amine.
 4. The adhesive of Claim 1 wherein the blocked isocyanate, urethane system includes an alcohol.
 5. The adhesive of Claim 1 wherein the blocked isocyanate, urethane system includes a polyol.
 6. The adhesive of Claim 1 wherein the blocked isocyanate, urethane system includes a high molecular weight prepolymer containing hydroxyl functionality.
 7. The adhesive of Claim 1 wherein the blocked isocyanate, urethane system includes a high molecular weight prepolymer containing isocyanate functionality.

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8. A method for forming a coated abrasive belt comprising:
- a) providing a coated abrasive strip having first and second opposed ends;
and
 - b) joining the ends of the strip with an adhesive comprising a blocked isocyanate, urethane system.
9. The method of Claim 8 further comprising the step of crosslinking the adhesive with an amine.
10. The method of Claim 8 further comprising the step of crosslinking the adhesive with an alcohol.
11. The method of Claim 8 further comprising the step of crosslinking the adhesive with a polyol.

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12. A method for forming a coated abrasive belt comprising joining ends of the belt together with an adhesive comprising a blocked isocyanate, urethane system.
13. A method for forming a coated abrasive belt comprising:
- a) forming a blocked isocyanate, urethane system that includes a blocked isocyanate terminated polyurethane prepolymer;
 - b) joining ends of a strip of coated abrasive with the blocked isocyanate, urethane system; and
 - c) heating the strip to cure the blocked isocyanate, urethane system to crosslink the blocked isocyanate with a polyamine or a polyol.

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cont:

14. A method for forming a coated abrasive belt comprising:
- a) forming a blocked isocyanate, urethane system that includes a high molecular weight polyurethane containing hydroxyl functionality;
 - b) joining ends of a strip of coated abrasive with the blocked isocyanate, urethane system; and
 - c) heating the strip to cure the blocked isocyanate, urethane system to crosslink the high molecular weight polyurethane containing hydroxyl functionality with a blocked polyisocyanate.
15. A method for forming a coated abrasive belt comprising:
- a) forming a blocked isocyanate, urethane system by mixing a first component with a second component;
 - b) joining ends of a strip of coated abrasive with the blocked isocyanate, urethane system; and
 - c) heating the strip to cure the blocked isocyanate, urethane system.
16. The method of Claim 15 wherein the first component includes a blocked isocyanate terminated polyurethane prepolymer and the second component includes polyamine or polyol.
17. The method of Claim 15 wherein the first component includes a high molecular weight polyurethane containing hydroxyl functionality and the second component includes blocked polyisocyanate.